

REMARKS

35 U.S.C. § 102 Rejections

The Examiner has rejected claims 1-14 under 35 U.S.C. § 102(e) as being anticipated by Ukita, et al. (EP 1093272).

Applicant has amended the specification and the claims, and following is a discussion of such amendments.

Claims 1 and 10 have been amended to replace the term “serial connector” with the term “serial port.” It is apparent, for example from the first paragraph of Page 24 of the application as filed, that the serial connector is an optional component of the serial port. To maintain the clarity of the claims, the serial port of the adapter has been named “a first serial port” and the serial port to which it may be connected on another device has been named “a second serial port.”

Claims 1 and 10 have been amended to specify that the Bluetooth connection module is for conducting Bluetooth communication by transmitting and receiving Bluetooth radio frequency signals with another Bluetooth-enabled device.

Furthermore, claims 1, 10, and 12 have been amended to remove the requirement that the serial connector allows connection of a serial cable between the adapter and a device having a serial port. This feature is now included in dependent claims 2, 11, and 15. It is apparent from the application as filed that the claimed serial adapter can be used to replace a “dumb” serial cable replacement Bluetooth device (see Page 18, lines 12 to 18; Page 25, last paragraph, and Page 26, for example). As explained on Page 26, third paragraph, with the prior art “dumb” device, the “*user takes two ‘cable replacement*

serial adapters' which will have the same type of connector as the cable and plugs them into the appropriate connectors at both ends of the serial link". Thus, the prior art "dumb" device is plugged into the connectors where the serial cable was attached to replace a serial cable. As the serial adapter of the invention is intended to replace such "dumb" devices, it may also be connected directly to the connectors for the serial cable, without an additional serial cable. It will also be apparent to those skilled in the art that there is no technical reason why a serial cable, rather than a direct connection, should be necessary for the invention. For this reason, this feature has been removed from the independent claims as nonessential.

Claim 13 has been amended to define more explicitly the function of the claimed computer program. Claims 7 and 9 have been cancelled. "Bluetooth" has been acknowledged as a registered trade mark on Page 1.

The point of the present invention is to allow a legacy device that has traditionally communicated via a wired serial connection to communicate via a wireless Bluetooth connection without significant reconfiguration of the legacy device. The invention solves this problem by providing a Bluetooth serial adapter that has a serial to Bluetooth interface between its serial port and the Bluetooth connection module. The serial to Bluetooth interface receives serial connection control commands, such as AT commands, from the legacy device over the serial port and maps these serial connection control commands to Bluetooth connection control events which are passed to the Bluetooth connection module to set up the Bluetooth connection. In this way, an application on the legacy device can control the set up of a Bluetooth connection using

serial connection commands, such as AT commands, without any knowledge of Bluetooth connection control events. According to the invention, the data communication application on the legacy device can control communication without being completely reconfigured for Bluetooth, because the Bluetooth to serial interface is able to convert the same type of serial commands that the application on the legacy device had previously used for the set up of a serial cable connection. This significantly reduces the amount of reconfiguration required for a legacy application to communicate over a Bluetooth connection. This solution is neither disclosed nor suggested by the available prior art.

In Ukita, an application terminal 2 is connected via a slot 5 with a communication card 6. The communication card 6 is capable of Bluetooth communication with a mobile telephone 7. When requested to do so by the application terminal 2, the communication card 2 sets up a Bluetooth link with the mobile telephone 7 following the procedure shown in Figure 3. The Examiner has assumed that the terminal 36 on the communication card 6 provides a serial port. There is no disclosure in Ukita to support this assumption, but even working from this assumption, Ukita does not disclose a Bluetooth serial adapter according to the present invention.

In Ukita, the application terminal 2 does not control the connection to the mobile telephone, it simply asks the communications card 6 to provide such a connection. Any serial connection control commands are generated and executed by the communications card 6 alone. This is described as a particular advantage of the system of Ukita (see paragraphs 0060 to 0062). Consequently, there is no disclosure in Ukita of serial

connection control commands, such as AT commands, passing between the application terminal 2 and the communications card 6, over the “serial port” identified by the Examiner.

The only AT commands disclosed in Ukita are used to control the operation of the mobile phone 7 and these are generated in the communication card 6 and only passed between the communication card 6 and the mobile telephone 7 (see step SP14 in Figure 3). There is no transmission of AT commands between the application terminal 2 and the communication card 6. This is emphasised in Figure 5 which shows that the layer for processing AT commands is entirely within the communication card 6 and communicates only with the corresponding layer on the mobile telephone side.

Consequently, there is no disclosure in Ukita of a serial to Bluetooth interface arranged for receiving serial connection control commands input via a first serial port, as required by claim 1, because all of the connection control commands are generated downstream of the application terminal 2. Moreover, there is therefore no disclosure of an interface arranged for mapping received serial connection control commands to Bluetooth connection control events, as further required by claim 1.

In the first embodiment (paragraph 0049 of Ukita) *“the CPU 32 controls the operation of the mobile telephone 7 by the transfer of AT commands in step SP14, thereby connecting the line between the mobile telephone 7 and the network.”* Thus, the *“network connection capability”* is the ability to control the operation of the mobile telephone with AT commands to connect the mobile telephone to the network, i.e., the telephone network.

Referring to Figure 1 of Ukita, it will be appreciated that if AT commands are generated in the CPU 39 of the application terminal 2, rather than the CPU 32 of the communications card 6, the commands must reach the CPU 17 of the mobile phone 7 in order to control the modem 15, which connects the mobile phone to the network. Thus, the AT commands pass from the application terminal 2 to the communications card 6 and over the Bluetooth wireless link between the antennas 10 and 29 to the mobile phone 7. Even in the modified embodiment referenced by the Examiner, there is no processing of the AT commands by the communications card, the AT commands are simply passed as data over the Bluetooth link.

There is therefore no disclosure in Ukita of the claimed requirements of the serial to Bluetooth interface, i.e.:

mapping received serial connection control commands to Bluetooth connection control events; and

outputting the so-determined Bluetooth connection control events to the Bluetooth connection module.

The present invention is thus clearly distinguished over the disclosure of Ukita by features that are neither disclosed, suggested, nor rendered obvious by the cited prior art. Consequently, the claimed subject matter meets the requirements for both novelty and inventive step and the invention is therefore patentable in view of that disclosure.

Applicant, accordingly, respectfully requests withdrawal of the rejections of claims 1-14 under 35 U.S.C. § 102(e) as being anticipated by Ukita.

Applicant respectfully submits that the present application is in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call Stephen M. De Klerk at (408) 720-8300.

Please charge any shortages and credit any overages to Deposit Account No. 02-2666. Any necessary extension of time for response not already requested is hereby requested. Please charge any corresponding fee to Deposit Account No. 02-2666.

Respectfully submitted,

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